to be ſet 8. or 10. foot higher than the Hole D. and the *Shutter* made of Iron, or Wood that will not ſhrink, that it may ſhut very cloſe; this *Dore* being made large enough to receive the *Cradle* with eaſe.

G. The *Grate* or *Cradle*, which is narrower below than above, that the Aſhes may the more eaſily fall, and the Air excite the Fire; the bottom being barred as the ſides.

H. The *Border* or *Ledge* of the *Cradle*, that reſts upon the *Ledge* C.

I. Four *Chains* of *Iron* faſtned to the four corners of the *Cradle*, for taking of it up, and letting of it down.

K. The *Chain* of *Iron*, to which the other are faſtned.

L. The *Pulley* of *Iron* or *Braſs*, through which the *Chain* paſſeth.

M. A *Hook*, on which the end of the *Chain* is faſtned by a *Ring*, the *Hook* fixed being placed in the ſide of the Dore.

N. A *Barr* of *Iron* in the Walls, to which the *Pulley* is faſtned.

The higher the *Shaft* of the Chimney is, the Fire draws the Air the better. And this Invention may be made uſe of in the *Pits* or *Shafts*, that are *Perpendicular*, or any wiſe inclining towards it, when there is want of freſh Air at the bottom thereof, or any moleſtation by unwholſom Fumes or Vapours.

A way to break eaſily *and* ſpeedily *the hardeſt* Rocks, *communicated by the ſame Perſon, as he received it from Monſieur* Du Son, *the Inventor.*

Though the Invention of breaking with eaſe, and diſpatch, hard Rocks, may be uſeful on ſeveral occaſions, the benefit is incomparably great, that may thereby accrue to thoſe, who have *Adits* or Paſſages to cut through hard *Rocks*, for making paſſage for Water to run out by, in *Mines* of *Lead*, *Tin*, or any other whatſoever; theſe *Adits* appearing to be the ſureſt, cheapeſt, and moſt advantagious way imaginable, for draining of the ſame.

That

That which is here to be deſcribed, was invented by one of the moſt Excellent *Mechanicks* in the World, *Monſieur du Son*, who lately put it in practice himſelf in *Germany*, at the deſire of the *Elector* of *Mentz*. The manner is, as followeth.

The *Mine* or *Adit* is to be made ſeven or eight foot high, which though it ſeem to make more work downwards, yet will be found neceſſary for making the better diſpatch by rendring the Invention more effectual.

There is a *Tool* of *Iron* well-ſteeled at the end, which cuts the Rock, (of the ſhape ſhewed by *Fig.* 2. here annexed;) 20. or 22. Inches long or more, and ſome 2 ½ Inches *Diameter* at the ſteeled end, the reſt being ſomewhat more ſlender. The ſteeled end is ſo ſhaped, as makes it moſt apt to pierce the Rock, the Angles at that end being ſtill to be made the more obtuſe, the harder the Rock is. This *Tool* is to be firſt held by the hand, in the place, where the Hole, to be made for the uſe, which ſhall here be ſhewed, is to be placed; that is, in the middle between the ſides of the Rock, that is to be cut, but as near the bottom as may be. The *Tool* being placed, is to be ſtruck upon with an Hammer, the heavier the better, either ſuſpended by a Shaft turning upon a Pin, or otherwiſe, ſo as one man may manage the Hammer, while another holds the Tool or Piercer. If it be hung in a *Frame*, or other convenient way, he that manageth it hath no more to do, but to pull it up at firſt as high as he can, and let it fall again by its own weight, the motion being ſo directed, as to be ſure to hit the Piercer right. After the ſtroke of the Hammer, he that holds the Piercer, is to turn it a little on its point, ſo that the Edges or Angles at the point may all ſtrike upon a new place: and ſo it muſt ſtill be ſhifted after every ſtroke, by which means, ſmall Chipps will at every ſtroke be broken off, which muſt from time to time be taken out, as need requires. And thus the work muſt be continued, till the *Hole* be 18. or 20. Inches deep, the deeper the better. This *Hole* being made as deep as is required, and kept as ſtreight and ſmooth in the ſides, as is poſſible, there is then a kind of double *Wedge* to be made, and

fitted

fitted exactly for it; the ſhape whereof is to be ſeen in the annexed 3. Figure.

This double *Wedge*, being 12. or 13. Inches long, each piece of it, and ſo made, as being placed in their due poſition, they may make up a *Cylinder*, cut *Diagonal*-wiſe. The two flat ſides, that are contiguous, are to be greaſed or oyled, that the one may ſlip the more eaſily upon the other; and one of them, which is to be uppermoſt, having at the great end a hol'ow *Creaſe* cut into it round about, for faſtning a *Cartridge*, full of *Gunpowder*, to it with a thred, the round end of the *Wedge* being pared as much, as the thickneſs of the Paper or Paſtboard, that holds the Powder, needs to make the outſide thereof *oven* with the reſt of the *Wedge*. This *Wedge* muſt have an Hole drilled through the longeſt ſide of it, to be filled with *priming Powder*, for firing of the Powder in the *Cartridge*; which needs have no more, than half a pound of Powder, though upon occaſion a greater quantity may be uſed, as ſhall be found requiſite.

Then this *Wedge*, being firſt thruſt into the Hole with the *Cartridge*, the round ſide, where the Priming-hole is, being uppermoſt, the other *Wedge* is to be thruſt in, home to the due poſition, care being taken, that they fit the Hole in the Rock as exactly as may be. Then the end of the lower *Wedge* being about an Inch longer, than that of the upper outwardly, and flatned, priming Powder is to be laid upon it, and a piece of burning *Match* or *Thread* dipt in *Brimſtone* or other ſuch prepared combuſtible Matter, faſtned to it, that may burn ſo long, before it fire the Powder, as he, that orders it, may have time enough to retire quite out of the Pit or *Adit*, having firſt placed a piece of Wood or Iron ſo, as one end thereof, being ſet againſt the end of the lower Wedge, and the other againſt the ſide-wall, ſo as it cannot ſlip. Which being done, and the Man retired, when the Powder comes to take fire, it will firſt drive out the uppermoſt Wedge, as far as it will go; but the ſlaunting figure of it being ſo made, as the farther it goes backward, the thicker it grows, till at the laſt it can go no farther, then the

fire

fire tears the Rock to get forth, and ſo crackes and breaks it all about, that at one time a vaſt deal of it will either be quite blown out, or ſo crackt and broken, as will make it eaſy to be remov'd: And according to the effect of one ſuch *Cartridge*, more may be afterwards made uſe of, as hath been ſaid.

Obſervables upon a Monſtrous Head.

This was the Head of a *Colt*, repreſented in the annexed *Figure* 4. firſt viewed by Mr. *Boyle*, who went into the Stable where the *Colt* lay, and got the Head haſtily and rudely cut off, the *Body* thereof appearing to his Eye compleatly formed, without any *Monſtroſity* to be taken notice of in it. Afterwards he cauſed it to be put into a Veſſel, and covered with *Spirit of Wine*, thereby chiefly intending, to give good example, together with a proof, that by the help of the ſaid *Spirit*, (which he hath recommended for ſuch Properties in one of his *Eſſays* of the *Uſefulneſs* of *Natural Philoſophy*) the parts of *Animals*, and even *Monſters*, may in *Summer* it ſelf be preſerved long enough, to afford *Anatomiſts* the opportunities of examining them.

The Head being opened, and examined, it was found,

Firſt, That it had no ſign of any *Noſe* in the uſual place, nor had it any, in any other place of the Head, unleſs the double Bagg CC, that grew out of the midſt of the forehead, were ſome rudiment of it.

Next, That the *two Eyes* were united into one *Double Eye*, which was placed juſt in the middle of the Brow, the Noſe being wanting, which ſhould have ſeparated them, whereby the two Eye-holes in the Scull were united into one very large round hole, into the midſt of which, from the Brain, entred one prety large *Optick Nerve*, at the end of which grew a great *Double Eye*; that is, that *Membrane*, called *Sclerotis*, which contained both, was one and the ſame, but ſeemed to have a *Seam*,

by

Fig: 1

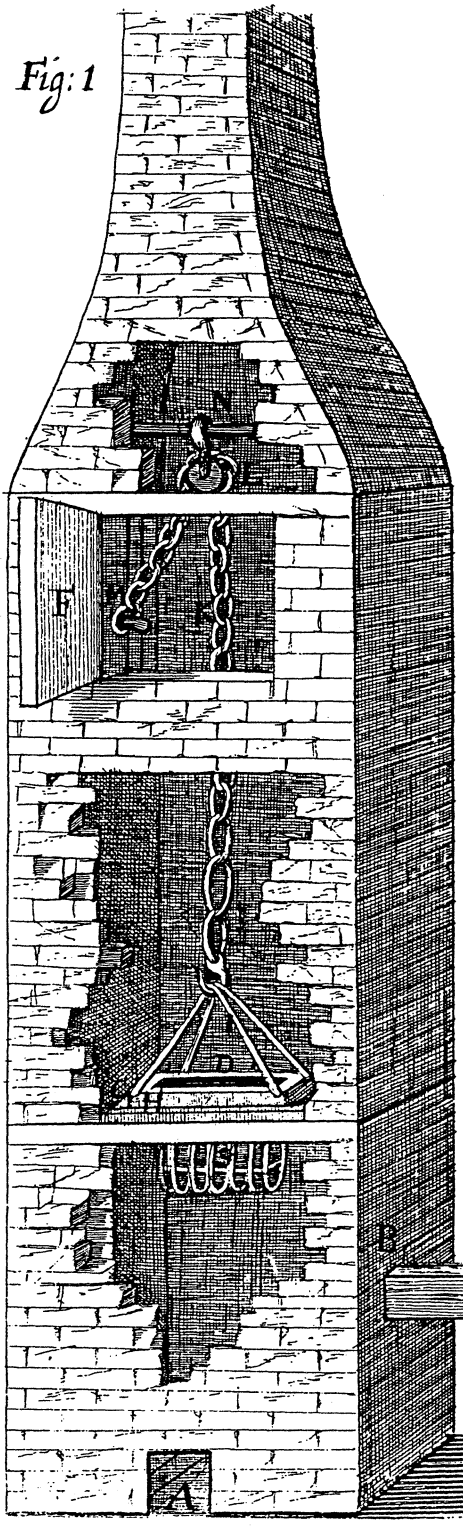

Fig: 2

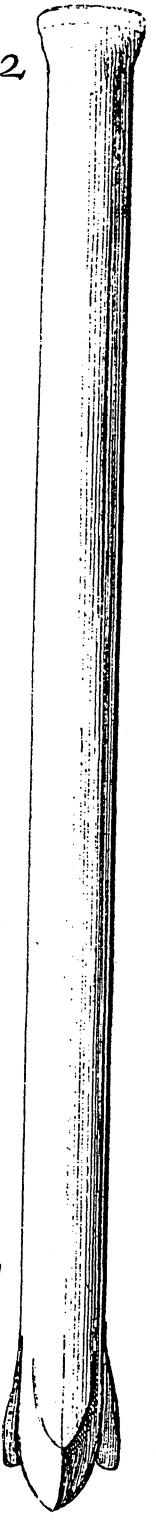

Fig: 3